EQ700 Ultra 720+ Series

True Day/Night Box Camera

User's Manual

***** Lens not included.***

EverFocus

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Precautions

Please read this manual first to ensure correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

1. **Do not install the camera near electric or magnetic fields.**
   Install the camera away from TV / radio transmitters, magnets, electric motors, transformers and audio speakers, because the electromagnetic fields generated by these devices may distort the video image or otherwise interfere with camera functions.
2. **Never disassemble the camera beyond the recommendations in this manual, nor apply materials to it other than those recommended herein.**
   Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.
3. **Try to avoid pointing the camera toward the sun.**
   In some circumstances, direct sunlight may cause permanent damage to the sensor and / or internal circuits. It may also create unbalanced illumination that may be beyond the camera's ability to compensate.
4. **Keep the power cable away from water and other liquids. Never touch the power cable with wet hands.**
   Touching a wet power cable with your hands or touching the power cable with wet hands may result in electric shock.
5. **Never install the camera in areas exposed to oil, gas or solvents.**
   Oil, gas or solvents may cause equipment failure, electric shock or, in extreme cases, fire.
6. **Cleaning**
   For cameras with interchangeable lenses, do not touch the surface of the sensor directly with your hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Do not use complex solvents, or corrosive or abrasive agents to clean any part of the camera.
7. **Do not operate the camera beyond the specified temperature, humidity and power source levels.** This camera is suitable for indoor operation only.
   Use the camera at temperatures within -10°C ~ 50°C (14°F ~ 122°F) and humidity between 20 ~ 80%; this device is not rated as submersible. The input power source should be 12VDC or 24VAC. **The use of a properly fused or "Class 2 Limited Power Source" power supply is highly recommended.**
8. **Mounting**
   Select a solid mounting surface that will support the weight of the camera and any additional loading from wind, snow, ice or other factors. Securely attach the camera to the mounting surface using screws and anchors that will properly support the camera. If necessary, (e.g. when mounting the camera to a drop ceiling, or unsupported ceiling) use a safety wire to provide additional support for the camera.

Safety Notice

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

RoHS

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

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1. Introduction

The EQ700 is a box camera equipped with 1/3" 960H SONY Exview HAD CCD II that produces 720TVL resolution 100% digital images, The camera delivers vastly superior video quality compared to traditional CCTV images. This superior resolution not only captures more critical evidentiary information, but the inherent ability for video also extends the area of coverage, expedites completion of investigations, resolves complaints and reduces both capital and operational costs.

The EQ700 provides 2D Noise Reduction to improve picture clarity while enabling DVRs to improve disk storage utilization . Full suite of OSD menu options controlled from the built-in function buttons. Digital Wide Dynamic Range expansion to deliver properly exposed images despite bright light sources, deep shadows and/or unbalanced lighting in the same scene.

The EQ700 allows flexible choices of manual & DC iris control lenses with C / CS mount for outstanding coverage in a wide range of demanding surveillance environments while delivering stunning image quality.

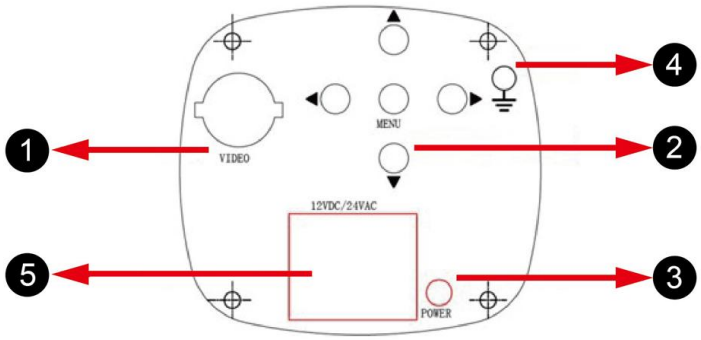
1.1 Packing List

- Camera Body x 1
- DC Power Pigtail Cable x 1
- User Manual x 1
- Lens Cover x 1
- C-mount Lens Adapter x 1
- Hexagon Wrench x 1

1.2 Features

- Ultra resolution of over 720 horizontal TV lines for astounding image quality
- Exview HAD II sensor delivers amazing ultra high sensitivity of 0.0001 lux - 500X better native light sensitivity without DSS low light boost - Zero Ghosting guaranteed
- Provides 2D-Noise Reduction to improve picture clarity while enabling DVRs to improve disk storage utilization
- Full suite of OSD menu options controlled from the built-in control buttons
- Digital Wide Dynamic Range expansion to deliver properly exposed images despite bright light sources, deep shadows and/or unbalanced lighting in the scene

2. Overview



No.	Name	Descriptions
1	**Video Output**	Connects to DVR or monitor using a 75 Ohm BNC-type coaxial cable.
2	**OSD Menu**	Use the function buttons to configure the settings in the OSD menu.
3	**Power LED**	Glows red then power is present.
4	**Grounding Stud**	Ensuring a good grounding when used.
5	**Power Input Terminal**	Connects to 12VDC/24VAC power source.

3. Installation

3.1 Lens Installation and Adjustment

You can install either a CS-mount or a C-mount lens into the camera. It is recommended to use a lens with aperture ratio of F/1.2 or lower. Please refer to the following reference steps.

CS-Mount Lens:

1. Remove the cover cap from the camera body.
2. Install the lens into the camera body.
3. Adjust the lens using the Focus / Zoom Screws.

C-Mount Lens:

1. Remove the cover cap from the camera body.
2. Install the lens into the camera body using the supplied C-mount lens adapter.
3. Adjust the lens using the Focus / Zoom Screws.

If you are using a **DC Auto Iris lens**:

1. Remove the cover cap from the camera body.
2. Install the lens into the camera body.
3. Connect the DC Iris Cable to the DC Auto Iris Lens Connector.

Warning: Installing a C-mount lens without the C-mount lens adapter may damage the camera sensor.

3.2 Top / Bottom-Mount

You can use a mounting bracket and screw it on the top of the camera body to suspend the camera, or on the bottom of the camera body to support the camera.

4. Basic Connection

1. Connect the camera to a device, such as a DVR, to display the image.
2. Connect the camera to a 12VDC or 24VAC power source using the supplied DC Power Pigtail Cable. The power LED will be lit in red.
3. Connect the camera to a DVR or a monitor for setting image aim and focus before mounting the camera.

5. OSD Menu Structure

The default value is marked with a star "*".

No.	Main	Sub Menu	Sub Menu / Function		
1	Lens	Auto*	Type	DC*	
			Mode	AUTO*, Open, Close	
			Speed	0-255 (default=80)	
		Manual			
2	Shutter AGC	Auto*	High Luminance	Mode	Shut + Auto Iris, Auto Iris*
				Brightness	0-255 (default=24)
			Low Luminance	Mode	AGC*, Off
				Brightness	x0.25, x0.50*, x0.75, x1.00
		Manual	Mode	Shut+AGC	
			Shutter	1/60*, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	
			AGC	6.00*, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, 44.80	
3	White Balance	ATW*	Speed	0-255 (default=239)	
			Delay CNT	0-255 (default=16)	
			ATW Frame	x0.50, x1.0, x1.5, x2.0*	
			Environment	Indoor*, Outdoor	
		Push			
		User1	B-Gain	0-255 (default=29)	
			R-Gain	0-255 (default=34)	
		User2	B-Gain	0-255 (default=45)	
			R-Gain	0-255 (default=26)	
		Anti CR			
		Manual	Level	24-90 (default=58)	
		Push lock			
4	Back Light	Off* / BLC / HLC			
5	Picture Adjust	Mirror	Off* / On		
		Brightness	0-255 (default=0)		
		Contrast	0-255 (default=128)		
		Sharpness	0-255 (default=128)		
		Hue	0-255 (default=128)		
		Gain	0-255 (default=150)		
6	ATR	Off*			

		On	Luminance	Low, Mid*, High	
			Contrast	Low, Mid-low, Mid, Mid-high, High*	
7	Motion Detection	Off*			
		On	Detect Sense	0-127 (default=111)	
			Block Display	Off*, On, Enable	
			Motion Area	Off*, On	
			Area Select	1/4*, 2/4, 3/4, 4/4	
			Top / Bottom	0-244 (default=0)	
			Left / Right	0-474 (default=0)	
8	Privacy	Off*			
		On	Area Select	1/8*, 2/8, 3/8, 4/8,5/8, 6/8, 7/8, 8/8	
			Top / Bottom	0-244 (default=0)	
			Left / Right	0-474 (default=0)	
			Color	1-8 (default=1)	
			Transparent	0.00, 0.50, 0.75, *1.00	
			Mosaic	*Off / On	
9	Day/Night	EXT1			
		EXT2			
		Auto*	Burst	Off*/On	
			Delay CNT	0-255 (default=004)	
			Day→Night	0-255 (default=001)	
			Night→Day	0-255 (default=020)	
		Color			
		B / W	Burst	Off* / On	
			IR Optimizer	Off	
				On*	Mode: Auto*/Center
					Level: 0-31 (default=015)
10	NR	NR Mode	Off		
			Y/C*	Y Level	000-015 (default=003)
				C Level	000-015 (default=003)
11	Camera ID	Off*			
		On	English letters, numbers and 28 symbols		
12	Sync.	Int.			
13	Language	English*, Japanese, German, French, Russian, Portuguese, Spanish Simplified Chinese			
14	Camera Reset				
15	Save all				

6. Specifications

Camera	
Part number	EQ700
Pickup Device	1/3” Sony Exview HAD II 960H High Sensitivity Interline CCD
Video Format	NTSC or PAL
Image Pixels	1020 x 508 (NTSC) / 1020 x 596 (PAL)
Effective Pixels	976 x 494 (NTSC) / 976 x 582 (PAL)
Scanning System	2:1 Interlace
Horizontal Resolution	720+ TVL
Sensitivity	Color ~ 0.001 lux, B/W ~ 0.0001 Lux / F=1.0
S/N Ratio	Over 50dB (AGC off)
Electronic Shutter	1/60s~1/100,000s
Video Output	BNC 1.0Vp-p 75Ω
Gamma Correction	0.45
Lens Type	C/CS Mount (lens sold separately)
BLC	OFF/BLC/HSBLC Selectable
Gain Control	Low light auto, bright light auto, manual selectable
White Balance	ATW, One Push, User1, User2, Anti-Crawl, Manual, Push Lock
Sync Mode	Internal Sync
Day/Night	True D/N with ICR; Auto
OSD Menu	Multiple Functions
OSD Languages	English, Spanish, French, Chinese, German, Japanese, Portuguese, Russian
Digital Noise Reduction	2D On/Off (Level adjustable)
ATR	On/Off (3 levels each adjustable for luminance and contrast)
Wide Dynamic Range	On/Off (3 levels each adjustable for luminance and contrast)
Mirror	Off/On
Motion Detection	Off/On for 4 selectable zones (On screen indication on alarm)
Privacy Mask	Off/On for 8 selectable zones
Environmental	Indoor
Power Source	12VDC/24VAC

Power Consumption	12VDC: 160mA , 2W max. /24VAC: 2W max.
Operating Temperature	-10°C~50°C / 14°F~122°F
Humidity	Less than 80% non-condensing
Dimensions (L x W x H)	129x 58x 55mm /5.08” x 2.28” x 2.17”
Weight	240g / 0.53lbs
Certifications	CE/FCC/RoHS

Specifications and designs are subject to change for improving the functionality of this product without notice.

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This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
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In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!

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